PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
Lynn Ann Casey	) Group Art Unit: 3629
Application No.: 10/686,608	) Examiner: Gabrielle M. McCormick
Filed: October 17, 2003	)
For: BORDER MANAGEMENT SOLUTION	) Confirmation No.: 8949

Attention: Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPEAL BRIEF UNDER BOARD RULE § 41.37

In support of the Notice of Appeal filed August 21, 2009, and further to Board Rule 41.37, Appellant presents this brief and enclose herewith the fee of $540.00 required under 37 C.F.R. § 1.17(c).

The time period for filing the Appeal Brief is two months from the date of the Notice of Appeal, which was dated August 21, 2009. Accordingly, this Appeal Brief is timely filed on or before October 21, 2009.

This Appeal responds to the rejection of claims 13, 20, 59-62 and 64-74 in the Final Office Action dated May 21,2009 (hereinafter "Office Action") and confirmed in the Advisory Action dated August 4, 2009 (hereinafter "Advisory Action").

If any additional fees are required or if the enclosed payment is insufficient, Appellant requests that the required fees be charged to Deposit Account 06-0916.

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I. Real Party In Interest

Accenture Global Services GmbH is the real party in interest.

II. Related Appeals and Interferences

There are currently no other appeals or interferences, of which Appellant, Appellant's legal representative, or assignee are aware, that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status Of Claims

Claims 1-12, 14-19, 21-58, 63, and 75 are canceled.

No claims are withdrawn from consideration but not canceled.

There are 17 claims pending. Claims 13, 20, 59-62, and 64-74 are pending and stand rejected.

The rejection of claims 13, 20, and 59-62, and 64-75 under 35 U.S.C. § 112, first paragraph, and the rejection of claims 13, 20, 59-62, and 64-74 under 35 U.S.C. § 103(a) are being appealed.

IV. Status Of Amendments

Appellant filed an Amendment After Final on July 21, 2009. According to the Advisory Action, the Amendment was entered.

V. Summary of Claimed Subject Matter

A. Independent Claim 13

Independent claim 13 recites a computer-based system (Specification pg. 12, para. 43, lines 1-2[1]; pgs. 13-14, para. 47, lines 5-6; pgs. 14-15, para. 50 generally; FIG. 1, ref. 10; FIG. 2, generally) for implementing a border management application architecture (Specification pg. 17, para. 59, lines 1-2; FIG. 3, ref. 30) comprising at least one processor (Specification pg. 20, para. 67, lines 1-4; FIG. 4, refs. 4102, 4104, 4106, 4108, 4110); at least one computerized database (Specification pgs. 20-21, para. 69, lines 2-5; pgs. 24-25, para. 79, lines 3 and 7; pg. 44, para. 142, lines 5-6; FIG. 4, ref. 420, 4202, 4204, 4206, 4208, 4210; Fig. 5, ref. 576; FIG. 14, ref. 1450) storing border management data (Specification pg. 46, para. 147, lines 4-5; FIG. 14, refs. 1454, 1456, 1458); and at least one computer-readable medium (Specification pg. 17, para. 59, line 4; pg. 20, para. 68, line 4; pg. 23, para. 75, lines 9-10; FIG. 3, refs. 335, 345, 355, 365; FIG. 4, ref. 4302; FIG. 5, ref. 542; FIG. 14, refs. 1454, 1456, 1458) encoding instructions (Specification pg. 20, para. 66, line 5; FIG. 4, refs. 40, 430) for implementing a border management application architecture.

The instructions include providing a set of core applications (Specification pg. 17, para. 59, line 3; FIG. 3, ref. 310) for standard border management functions (Specification pg.13, para. 46, line 3; FIG. 3, ref. 310 generally) in a shared applications architecture (Specification pg. 17, para. 59, lines 1-2 and 8-10; FIG. 3, ref. 30). The set of core applications includes a process imports application (Specification pg. 18, para.

[1] The Specification as filed was used as the basis to identify locations of claim elements in the specification. the Specification contained paragraph numbers rather than line numbers. Accordingly, the location references identify the page number, the paragraph number and the line in the paragraph where the claim element can be found.

60, line 5; FIG. 3, ref. 3114), a process exports application (Specification pg. 18, para. 60, lines 5-6; FIG. 3, ref. 3116), one or more investigation applications (Specification pg. 18, para. 60, line 8; FIG. 3, ref. 3132), an entry processing application (Specification pg. 18, para. 60, lines 6-7; FIG. 3, ref. 3122), an exit processing application (Specification pg. 18, para. 60, line 7; FIG. 3, ref. 3124), and a form submission and processing application (Specification pg. 18, para. 60, line 6; FIG. 3, ref. 3118).

The instructions also include providing a customer channel interface (Specification pg. 7, para. 18, line 6 and pgs. 18-19, para. 61, line 8; FIG. 3, ref. 335) for interconnecting a set of customer channels (Specification pgs. 18-19, para. 61, line 2; FIG. 3, ref. 330) that provide individual access points (Specification pg. 19, para. 62, line 1 and lines 3-5; FIG. 3, refs. 3302, 3304, 3306, 3308, 3310, and 3312) for a plurality of users (Specification pg. 19, para. 62, line 2) of the border management application architecture and the set of core applications.

The instructions also include providing one or more management access interfaces (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, line 9; FIG. 3, ref. 345) for interconnecting one or more management access channels (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, lines 2-3; FIG. 3, ref. 340) with the set of core applications to thereby provide access points (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, line 7) and tools (Specification pg. 19, para. 63, lines 1-6; FIG. 3, refs. 340, 3402, 3404, 3406, 3408, 3410, and 3412) for the sharing and access of border management data (Specification pg. 19, para. 63, lines 2-3; FIG. 3 generally) among the set of core applications.

The instructions also include providing an enforcement database (Specification pg. 25, para. 80, line 6; FIG. 5, ref. 580 (referred to in the text as enforcement database 582)) storing case data and individual data (Specification Pg. 25, para. 80, lines 6-7; FIG. 5, text within ref. 580 (referred to in the text as enforcement database 582); also Specification pg. 27, para. 85, lines 5-13; FIG. 6 generally).

The set of core applications further comprise a set of case management applications (Specification pg. 18, para. 60, line 9; FIG. 3, ref. 320), and the set of case management applications further comprise a set of intelligence applications (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3210) used to transform the border management data into intelligence (Specification pg. 25, para. 80, lines 2-3; FIG. 13, ref. 1350) using the shared border management data and the case data and the individual data stored in the enforcement database (Specification pg. 27, para. 85, lines 5-13; FIG. 6 generally).

B. Dependent Claim 59

Dependent claim 59 recites the computer-based system for implementing a border management application architecture of claim 13 (see claim 13 above), wherein the set of intelligence applications (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3210) includes an information synthesis application (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3212) and a risk scoring and analytics application (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3214) that applies neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize

information, identify patterns, analyze historical information, and develop risk scores (Specification pg. 26, para. 84, lines 1-9; FIG. 5, refs. 50, 580).

C. Dependent Claim 62

Dependent claim 62 recites the computer-based system for implementing a border management application architecture of claim 13 (see claim 13 above), wherein the instructions further include providing a shared security and integration open architecture (Specification pg. 44, para. 142, line 4; pg. 45, para. 144, lines 1-4; FIG. 14, ref. 1420) between the customer channel interface and the set of core applications, the shared security and integration open architecture monitoring access to the core applications (Specification pg. 45, para. 144, lines 5-7).

D. Independent Claim 64

Independent claim 64 recites a computer-implemented method

(FIG 6, ref. 600: Specification pg. 27, para. 86, lines 1-3 (method); pg. 28, para. 89, lines 6-7 (computer-implemented);

FIG 7, ref. 700: Specification pg. 30, para. 95, lines 1-4 (method); pg. 31, para. 98, lines 5-6 (computer-implemented);

FIG 8, ref. 800: Specification pg. 33, para. 107, lines 1-3 (method); pg. 34, para. 110, lines 5-7 (computer-implemented);

FIG 9A, ref. 900: Specification pg. 35, para. 113, lines 1-3 (method); pg. 36, para. 116, line 5 (computer-implemented);

FIG 9B, ref. 950: Specification pg. 36, para. 118, lines 1-3 (method); pgs. 36-37, para. 118, lines 8-9 (computer-implemented);

FIG 10, generally: Specification pg. 37, para. 121, lines 1-3 (method); pg. 38, para. 123, line 2 (computer-implemented);

FIG 11, ref. 1100: Specification pg. 39, para. 126, lines 1-3 (method); pg. 40, para. 129, line 5 (computer-implemented);

FIG 12, generally: Specification pg. 42, para. 135, lines 1-3 (method); pg. 42, para. 136, lines 7-8 (computer-implemented);

FIG 13, ref. 1300: Specification pgs. 42-43, para. 137, lines 1-3 (method); pg. 43, para. 139, lines 4-5 (computer-implemented))

for implementing an integrated border management system (Specification pg. 12, para. 43, lines 1-2; pgs. 13-14, para. 47, lines 5-6; pgs. 14-15, para. 50 generally; FIG. 1, ref. 10; FIG. 2, generally) for managing individual and trade border transactions (see citations above for computer implemented method for individuals and Specification pg. 44; para. 140, lines 1-3 for trade). The method comprises steps of receiving an individual border transaction request and a trade border transaction request at a processing location (Specification pg. 14, para. 48, lines 6-8 and para. 49, lines 1-2, pages 14-15, para.50, lines 1-2; FIG. 2, refs. 112, 114 for individuals, refs. 116, 118 for trade); storing the individual and trade border transaction requests in a border management knowledge base (Specification pg. 25, para. 80, lines 2-3; FIG. 13, ref. 1350); and processing, in an automated manner, a subset of the individual and trade border transaction requests to determine whether the requests should be granted (Specification pg. 14, para. 48, lines 6-8 and para. 49, lines 1-2, pages 14-15, para.50, lines 1-2; FIG. 2, refs. 112, 114 for individuals, refs. 116, 118 for trade).

The method also comprises steps of receiving individual entry data and trade import data, wherein the individual entry data includes arrival details (Specification pg. 15, para. 52, line 2; FIG. 2, ref. 122), and wherein the trade import data includes import details (Specification pg. 15, para. 53, line 2; FIG. 2, ref. 126); storing the individual entry data and trade import data in the border management knowledge base

(Specification pg. 24, para. 78, lines 3-6; FIG. 5, ref. 574); and monitoring (Specification pg. 45, para. 144, lines 6-7; FIG. 13, ref. 1310); the receipt of the individual border transaction request and trade border transaction request, the storing of the requests in the border management knowledge base, the receipt of the individual entry data and trade import data, and the storing of the individual entry data and trade import data in the border management knowledge database using a security and integration open architecture (Specification pg. 45, para. 144, lines 1-7; pg. 46, para. 149, lines 2-4; FIG. 14, ref. 1420).

The method also comprises steps of analyzing, by an intelligence engine, (Specification pg. 25, para. 80, lines 2-3; FIG. 13, ref. 1350) at least one of the individual entry data, the trade import data, the individual border transaction request, and the trade border transaction request stored in the border management knowledge base to generate border intelligence (Specification pg. 42, para. 135, lines 5-6; FIG. 12, ref. 1220) for detecting irregular individual and trade border transaction activity (Specification pg. 25, para. 80, lines 2-3; pg. 27, para. 85, lines 5-13; FIG. 6 generally, FIG. 13, ref. 1350).

The analyzing includes applying neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores (Specification pg. 26, para. 84, lines 1-9; FIG. 5, refs. 50, 580).

The border intelligence includes advance passenger information, denied passenger information, alerts, watch lists, case patterns, tips, expired visa and overstay information (Specification pg. 42, para. 135, lines 7-10; FIG. 12, refs. 1222, 1224, 1226,

1228, 1230, 1232), investigation initiations, and alert list additions (Specification pg. 42, para. 136, lines 1-6; FIG. 12, ref. 1244).

The method also comprises steps of storing the irregular individual and trade border transaction activity in the border management knowledge database (Specification pg. 42, para. 136, lines 4-8; FIG. 12 generally).

E. Dependent claim 68

Dependent claim 68 recites the method of claim 64 (see claim 64 above), further comprising providing an inspection station with real-time access to the individual entry data and case history information (Specification pg. 28, para. 89, lines 4-10; FIG. 6, ref. 620); verifying, at the inspection station, an individual's identity (Specification pg. 28, para. 88, lines 2-4; FIG. 6, ref. 610); after verifying the individual's identity, determining, at the inspection station, whether to deny the individual's entry into a country based upon the individual entry data and criminal history information (Specification pg. 29, para. 90, lines 1-2; FIG. 6, ref. 630); and if the individual's entry is denied, storing a record of the denial in the border management knowledge database (Specification pg. 29, para. 91, lines 1-3; FIG. 6, ref. 654).

F. Dependent claim 69

Dependent claim 69 recites the method of claim 68 (see claim 68 above), further comprising providing an inspection station with real-time access to the trade import data (Specification pg. 44, para. 140, lines 1-3) and case history information (Specification pg. 28, para. 89, lines 4-10; FIG. 6, ref. 620); determining, at the inspection station,

whether to deny the individual's entry into a country based upon the individual entry data and criminal history information (Specification pg. 29, para. 90, lines 1-2; FIG. 6, ref. 630); and if the individual's entry is denied, storing a record of the denial in the border management knowledge database (Specification pg. 29, para. 91, lines 1-3; FIG. 6, ref. 654).

G. Independent Claim 70

Independent claim 70 recites a computer-readable medium (Specification pg. 17, para. 59, line 4; pg. 20, para. 68, line 4; pg. 23, para. 75, lines 9-10; FIG. 3, refs. 335, 345, 355, 365; FIG. 4, ref. 4302; FIG. 5, ref. 542; FIG. 14, refs. 1454, 1456, 1458) encoding instructions (Specification pg. 20, para. 66, line 5; FIG. 4, refs. 40, 430) for implementing a border management application architecture (Specification pg. 17, para. 59, lines 1-2; FIG. 3, ref. 30).

The instructions include providing a set of core applications (Specification pg. 17, para. 59, line 3; FIG. 3, ref. 310) for standard border management functions (Specification pg.13, para. 46, line 3; FIG. 3, ref. 310 generally) in a shared applications architecture (Specification pg. 17, para. 59, lines 1-2 and 8-10; FIG. 3, ref. 30). The set of core applications includes a process imports application (Specification pg. 18, para. 60, line 5; FIG. 3, ref. 3114), a process exports application (Specification pg. 18, para. 60, lines 5-6; FIG. 3, ref. 3116), one or more investigation applications (Specification pg. 18, para. 60, line 8; FIG. 3, ref. 3132), an entry processing application (Specification pg. 18, para. 60, lines 6-7; FIG. 3, ref. 3122), an exit processing application (Specification

pg. 18, para. 60, line 7; FIG. 3, ref. 3124), and a form submission and processing application (Specification pg. 18, para. 60, line 6; FIG. 3, ref. 3118).

The instructions also include providing a customer channel interface (Specification pg. 7, para. 18, line 6 and pgs. 18-19, para. 61, line 8; FIG. 3, ref. 335) for interconnecting a set of customer channels (Specification pgs. 18-19, para. 61, line 2; FIG. 3, ref. 330) that provide individual access points (Specification pg. 19, para. 62, line 1 and lines 3-5; FIG. 3, refs. 3302, 3304, 3306, 3308, 3310, and 3312) for a plurality of users (Specification pg. 19, para. 62, line 2) of the border management application architecture and the set of core applications.

The instructions also include providing one or more management access interfaces (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, line 9; FIG. 3, ref. 345) for interconnecting one or more management access channels (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, lines 2-3; FIG. 3, ref. 340) with the set of core applications to thereby provide access points (Specification pg. 7, para. 18, line 8 and pgs. 18-19, para. 61, line 7) and tools (Specification pg. 19, para. 63, lines 1-6; FIG. 3, refs. 340, 3402, 3404, 3406, 3408, 3410, and 3412) for the sharing and access of border management data (Specification pg. 19, para. 63, lines 2-3; FIG. 3 generally) among the set of core applications.

The instructions also include providing an enforcement database (Specification pg. 25, para. 80, line 6; FIG. 5, ref. 580, but referred to in the text as enforcement database 582) storing case data and individual data (Specification Pg. 25, para. 80, lines 7-8; FIG. 5, text within element representing ref. 580, but referred to in the text as

enforcement database 582; also Specification pg. 27, para. 85, lines 5-13; FIG. 6 generally).

The set of core applications further comprise a set of case management applications (Specification pg. 18, para. 60, line 9; FIG. 3, ref. 320), and the set of case management applications further comprise a set of intelligence applications (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3210) used to transform the border management data into intelligence (Specification pg. 25, para. 80, lines 2-3; FIG. 13, ref. 1350) using the shared border management data and the case data and the individual data stored in the enforcement database (Specification pg. 27, para. 85, lines 5-13; FIG. 6 generally).

H. Dependent Claim 71

Dependent claim 71 recites the computer-readable medium of claim 70 (see claim 70 above), wherein the set of intelligence applications (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3210) includes an information synthesis application (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3212) and a risk scoring and analytics application (Specification pg. 18, para. 60, lines 10-11; FIG. 3, ref. 3214) that applies neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores (Specification pg. 26, para. 84, lines 1-9; FIG. 5, refs. 50, 580).

I. Dependent Claim 74

Dependent claim 74 recites the computer-readable medium of claim 70 (see claim 70 above), wherein the instructions further include providing a shared security and integration open architecture (Specification pg. 44, para. 142, line 4; pg. 45, para. 144, lines 1-4; FIG. 14, ref. 1420) between the customer channel interface and the set of core applications, the shared security and integration open architecture monitoring access to the core applications (Specification pg. 45, para. 144, lines 5-7).

VI. Grounds of Rejection

A. Claims 13, 20, 59-62, and 70-74 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

B. Claims 59, 64, and 71 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to have sufficient disclosure and allegedly failing to comply with the enablement requirement.

C. Claims 65-69 stand rejected under 35 U.S.C. § 112, first paragraph, for unspecified reasons.

D. Claims 13, 20, 60-62, 70, and 72-74 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,115,690 to Wong ("*Wong*") in view of Coalition for Secure and Trade-Efficient Borders, *Rethinking our Borders: A Plan for Action* ("*Coalition*").

E. Claims 59 and 71 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Wong* in view of *Coalition* and in view of U.S. Patent Publication No. 2003/0115133 to Bian ("*Bian*").

F. Claims 64-67 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Coalition* in view of *Wong* in view of *Bian*.

G. Claims 68 and 69 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Coalition* in view of *Wong* in view of *Bian* in view of Houston Chronicle, *American* Responds / *Terrorist Watch List no Match for Pair / Hijacking Suspect Eluded All Controls* ("*Gugliotta*").

VII. Argument

A. The Rejection of Claims 13, 20, 59-62, and 70-74 Under 35 U.S.C. § 112, First Paragraph for Lack of Written Disclosure Should be Reversed, Because the Capabilities of the Computer-Readable Medium Encoding Instructions as Claimed are Adequately Disclosed.

Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 13 20, 59-62, and 70-74 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner noted that each claim contains limitations for "computer-readable medium encoding instructions . . . wherein said instructions include . . . providing a set of core applications . . . providing a customer channel interface for interconnecting a set of customer channels. . . and the set of core applications . . . providing . . . management access interfaces for interconnecting . . . channel with the set of core applications . . . providing an enforcement database . . . transform the border management data into intelligence." Office Action at 2. The Examiner then concluded that "neither the specification nor the figures provide adequate disclosure of the capabilities of the computer-readable medium encoding instructions as claimed." Office Action at 2. In the Advisory Action, the Examiner confirmed the rejections.

The Examiner concedes that "software is inherent in the operation of some system components such as a work station, laptop cell phone and pager." However, the Examiner continued that "these inherent software applications do not disclose the capabilities of the claimed subject matter *such as providing interconnections or transforming data into intelligence*." Office Action at 3 (emphasis added).

Appellant respectfully submits that claims are adequately supported by a written description. For example, FIG. 3 specifically illustrates a channel interface 335 between customer channels 330 and core applications 310 and a management and administrative interface 345 between information and knowledge management channels 340 and core applications 310. FIG. 4 also illustrates that logic 430 supports multiple electronic access channels 410 to disparate data resources 420. Business logic 430 between the multiple access channels 410 and the data resources 420 manages and coordinates the transfer of data. *See* Specification at pg. 20, para. 66. Also see, e.g., pg. 17, para. 59-pg. 20, para. 68. In addition, Specification pg. 25, para. 80, line 6 discloses an enforcement database 582 (shown in FIG. 5 as ref. 580).

Additionally, Appellant notes that the Specification discloses transforming data into intelligence on at least paras. 9, 16, 23, 44, 56-57, 60, 75, 80, 84-85, 135-136, 138-139, 141-142, and 148, and Figs. 1-3, 5, and 12-14. Para. 75, for example, discloses "analyzing information gathered from the other three quadrants to identify unusual activity and trends at the borders." Para. 75 also discloses that activities within the investigation and analysis quadrant also include "investigation and analysis of irregular entry, exit, or other events or behaviors, identifying visitors who have stayed beyond their authorized stay deadline." Para. 75 further discloses that "an investigator may use an investigative and intelligence toolset 542 . . . to further review and investigate a case." The foregoing disclosure demonstrates that the inventors had possession of the invention.

In the Advisory Action, the Examiner asserted that "the specification and figures do not provide support for computer-readable medium encoding instructions. The

specification does not use these terms and the implications of software as derived from the figures is not sufficient to comprehend the functionality of the software as claimed." Office Action at 2.

Even assuming the Examiner's characterization of the disclosure of the Specification is correct, which Appellant does not concede, the Manual Patent Examination Procedure (MPEP) § 2163.02 specifies, "The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement."

Applicant respectfully submits that the implications of software as derived from the figures and the Specification is amply sufficient to comprehend the functionality of the software as claimed. For example, FIG. 3 illustrates the applications architecture 30 that describes the functionality for "execution of border management capabilities" (Specification, pg. 17, para. 59, lines 5-6), namely "the core applications 310, interfaces 335, 345, 355, 365, customer channels 330, and information and knowledge management tool sets 340, 350, and 360" (Specification, pg. 17, para. 59, lines 3-5). The applications architecture 30 of FIG. 3 defines the interconnections "to share data and provide access to that data across all border management capabilities with in a secure framework." Specification, pg. 17, para. 59, lines 8-10.

The Specification further discloses and FIG. 3 further illustrates specifics as to the functionality of the core applications:

> Turning to FIG. 3 in particular, the core applications 310 of the application architecture 30 represent standard border management related functions, as well as case management applications, and intelligence applications. According to an embodiment of the present invention, core applications may include cargo targeting 3110, process cargo 3112, process imports 3114, process exports

> 3116, form submission and processing 3118, passenger targeting 3120, entry processing 3122, exit processing 3124, revenue collection 3126, background check 3128, law enforcement applications 3130, investigation applications 3132, and case management applications 320. The case management applications 320 may further include activity recording 3202, alert management 3204, workflow management 3206, information recording 3208, and intelligence applications 3210, such as information synthesis 3212, and risk scoring and analytics 3214.

Specification, pg. 18, para. 60, lines 1-11.

The Specification further discloses and FIG. 3 further illustrates specifics as to the functionality of the interfaces (*See* Specification, pgs. 18-19, para. 61, lines 7-9), the channels (*See* Specification, pgs. 18-19, para. 61, lines 1-7), the tool sets (*See* Specification, pg. 19, para. 63, lines 1-6; Specification, pg. 19, para. 65, lines 1-4).

The Specification further discloses and FIGS. 3, 13 and 14 further illustrates specifics as to the functionality of the software for transforming data into intelligence. The Specification further discloses the set of core applications for transforming data into intelligence: "The case management applications 320 may further include activity recording 3202, alert management 3204, workflow management 3206, information recording 3208, and intelligence applications 3210, such as information synthesis 3212, and risk scoring and analytics 3214." Specification, pg. 18, para. 60, lines 9-11; see also FIG. 3.

In addition, FIG. 14 illustrates the intelligence infrastructure 1400 that describes the functionality for "collecting and analyzing border enforcement data." Specification, pg. 44, para. 142, lines 1-2. The intelligence infrastructure is further described as including "an end user access device 1410, a security and integration open architecture layer 1420, a command and control element 1430, a smart messaging element 1440 a border management data store 1450, a risk assessment element 1460, an aggregation

engine 1470, and additional data sources 1480." Specification, pg. 44, para. 142, lines 3-7. The Specification further describes specifics of the functionality of the components of the infrastructure 1400 that are used to transform data into intelligence. *See* Specification, pgs. 45-46, paras. 146-149.

> The risk assessment element 1460 is described as
>
> > generat[ing] intelligence regarding a specific case or situation. Risk assessment applies neural networks and rules-based algorithms to data collected from the border management data store 1450 and from the additional data sources 1480, including government data sources 1482 and non-government data sources 1484. The risk assessment element 1460 generates knowledge and intelligence from the collected information and reports that knowledge and intelligence to the end user 1410 and updates the border management data store 1460 with any new information.

Specification, pg. 46, para. 148, lines 1-8.

Thus, the disclosure in the Specification and FIGS. 3, 5, and 14 of the applications, interfaces, channels, tool sets, interconnections, enforcement database, and intelligence infrastructure describe "the functionality of the software as claimed."

> By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter.

MPEP § 2163.07(a), quoting *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F. 2d 1376, 178 USPQ 279 (CCPA 1973).

> As a general rule, where software constitutes part of a best mode of carrying out an invention, description of such a best mode is satisfied by a disclosure of the functions of the software. This is because, normally, writing code for such software is within the skill of the art, not requiring undue experimentation, once its functions have been disclosed. * * * Thus, flow charts or source code listings are not a requirement for adequately disclosing the functions of software.

MPEP § 2163, quoting *Fonar Corp. v. General Electric Co.*, 107 F.3d 1543, 1549, 41 USPQ2d 1801, 1805 (Fed. Cir. 1997).

Appellant submits that the disclosure in the Specification and illustrated in FIGS. 3, 5, and 14 of the applications, interfaces, channels, tool sets, interconnections, enforcement database, and intelligence infrastructure necessarily discloses the functionality of the applications, interfaces, channels, tool sets, interconnections, enforcement database, and intelligence infrastructure, and that the disclosure of such functionality is "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and [it sets] forth the best mode contemplated by the inventor of carrying out his invention."

As such, claims 13 and 70, reciting "computer-readable medium encoding instructions . . . wherein said instructions include . . . providing a set of core applications . . . providing a customer channel interface for interconnecting a set of customer channels. . . and the set of core applications . . . providing . . . management access interfaces for interconnecting . . . channel with the set of core applications . . . providing an enforcement database . . . transform the border management data into intelligence" meet the requirements of 35 U.S.C. § 112, first paragraph.

Appellant has shown above that independent claims 13 and 70 comply with the written description requirement. Claims 20 and 59-62, depending from claim 13, and claims 71-74, depending from claim 70, 64, also comply with the written description requirement as they depend from claims 13 and 70, respectively.

In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 13, 20, 59-62, and 70-74 under 35 U.S.C. § 112, first paragraph.

B. The Rejection of Claims 59, 64, and 71 Under 35 U.S.C. § 112, First Paragraph for Lack of Sufficient Disclosure and Lack of Enablement Should be Reversed, Because the Specification and Figures Provide a Sufficient and Enabling Disclosure.

With regard to claims 59 and 71, the Examiner stated that each recites "analyzing data by applying neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores." Office Action at 3. The Examiner asserted that the Specification does not provide a sufficient disclosure for the recitations of using the data mining tools "to produce synthesized information, patterns risk scores, etc." Office Action at 3. The Examiner then asserted that "the specification does not disclose how the neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms operate (in combination or singly) to synthesize information, identify patterns, analyze historical information, and develop risk scores." Office Action at 3. The Examiner specifically contended, apparently referring to Specification pg. 26, para. 84, "[t]hese recitations do not provide enablement for how one of ordinary skill in the art would make or use the invention." Office Action at 3.

Appellant disagrees that the Specification and figures do not provide a sufficient disclosure, and further disagrees that the Specification and figures do not provide an enabling disclosure. Specifically, Appellant notes that the Specification provides an

enabling and sufficient disclosure for applying "neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores" as is currently recited by claims 59 and 71 in at least paras. 9, 16, 23, 44, 56-57, 60, 75, 80, 84-85, 135-136, 138-139, 141-142, and 148, and Figs. 1-3, 5, and 12-14. Appellant notes that, at least based on the disclosure outlined above, one of skill in the art would be able to implement these techniques.

In the Advisory Action, the Examiner asserted that "the mere recitation of these terms does not teach how these tools are used to synthesize information, identify patterns, analyze historical information and develop risks. P[00084] teaches that enforcement officials perform the analysis." Advisory Action at 2.

Even assuming the Examiner's characterization of the disclosure of the Specification is correct, which Appellant does not concede, the Specification discloses that the enforcement intelligence element 580 forms the intelligence using the intelligence infrastructure 1400 illustrated in FIG. 14. The component tools of the intelligence infrastructure 1400 are disclosed in the Specification used for "collecting and analyzing border enforcement data." Specification, pg. 44, para. 142, lines 1-2. In particular, the risk assessment element 1460

> generates intelligence regarding a specific case or situation. Risk assessment **applies neural networks** and **rules-based algorithms** to data collected from the border management data store 1450 and from the additional data sources 1480, including government data sources 1482 and non-government data sources 1484. The risk assessment element 1460 generates knowledge and intelligence from the collected information and reports that knowledge and intelligence to the end user 1410 and updates the border management data store 1460 with any new information.

Specification, pg. 46, para. 148, lines 1-8. How the component tools, including the risk assessment element 1460, are interrelated is amply illustrated in FIG. 14. Further, the process for forming the intelligence is described in the Specification in connection with Fig. 13. "From the collection, review and analysis of border intelligence, steps 1310, 1320, and 1330, further investigation and intelligence may be developed." Specification, pg. 43, para. 139, lines 1-2. Steps 1310-1360 are described in further detail in the Specification, pgs. 42-43, paras. 137, line 4 to para. 139, line 11.

Appellant submits that the disclosure in the Specification of the process illustrated in FIG. 13 and the intelligence infrastructure 1400 illustrated in FIG. 14 for forming the intelligence teach how the tools illustrated in enforcement intelligence element 580 of the investigation and intelligence quadrant 540 are used to synthesize information, identify patterns, analyze historical information and develop risks.

Appellant has shown above that independent claims 50 and 71 have sufficient disclosure and comply with the enablement requirement. Independent claim 64, although different in scope from claims 50 and 71, recites elements similar to claims 50 and 71 and was rejected for similar reasons. *See* Office Action at 3. For at least the reasons stated above with respect to claims 50 and 71, claim 64 also has sufficient disclosure in the Specification and drawings and complies with the enablement requirement.

In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 59, 64, and 71 under 35 U.S.C. § 103.

C. The Rejection of Claims 65-69 Under 35 U.S.C. § 112, First Paragraph for Unspecified Reasons Should be Reversed, Because the Reasons for the Rejection Have Not Been Clearly Articulated.

In the Office Action, in its summary of the Examiner rejected claims 65-69 under 35 U.S.C. § 112, first paragraph, but did not further specify how the Specification fails support the claims. The Examiner did not include claims 65-69 in its discussion of the rejections of Claims 13, 20, 59-62 and 70-74 for lack of written description, nor in its discussion of the rejections of Claims 59, 64, and 71 for lack of sufficient disclosure and lack of enablement. Office Action at 2. However, the Examiner provided no further detail. *See* Office Action at 2-34.

"The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity." MPEP 706. By failing to articulate clearly the reasons for the rejection of claims 65-69 under 35 U.S.C. § 112, first paragraph, the Examiner has prevented Appellant from being able to reply completely to the rejection.

In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 65-69 under 35 U.S.C. § 112, first paragraph.

D. Discussion of References

1. The *Wong* Reference

Wong is directed to a software system that automates the various aspects of running a successful and profitable Web business or e-business for "the sale of goods, services, insurance, subscriptions, etc." See *Wong* at Abstract. The system uses a

computing model based on a single integrated database management system (DBMS) and that is either Web-enabled or provided with a Web front-end. *See Wong* at Abstract.

2. The *Coalition* Reference

Coalition is directed to a plan for border management including "processing prior to arrival at the border and at first point of arrival for offshore goods" (*Coalition* at pg. 3, para. 10), reporting information via Internet (*See Coalition* at pg. 7, para. 5, 7), "[e]lectronic reporting systems . . . for companies" (*Coalition* at pg. 9, para. 9), "centralization of initial processing of applications (*See Coalition* at pg. 15, para. 5), "[u]sing technology to report and share intelligence" (*Coalition* at pg. 22, para. 11), and "creat[ing] a comprehensive computerized database to screen applicants for admission to Canada (*Coalition* at pg. 16, para. 13 – pg. 17, para. 6),

3. The *Bian* Reference

Bian is directed to a "system for providing a user with a higher risk score indicating the likelihood that a business under inquiry by the user is involved in questionable activity." *Bian* at Abstract. A neural network and algorithm "detects patterns of data that are characteristic of the outcome one is trying to predict." *Bian* at para. [0029].

4. The *Gugliotta* Reference

Gugliotta is directed to the Inter-Agency Border Inspection System (IBIS), which includes the National Automated Immigration Lookout System (NAILS), which "contains the immigration agency's list of deportees and other undesireables, as well as the State

Department's classified tip-off list and leads from other agencies" (*Gugliotta* at pg. 2, lines 18-19), and which "integrates database lists" from government agencies (*Gugliotta* at pg. 2, lines 33-36).

E. The Rejection of Claims Under 35 U.S.C. § 103(a) over *Wong* in view of *Coalition* Should be Reversed for Failure to Establish a *Prima Facie* Case of Obviousness.

Appellant respectfully requests that the Board reverse the rejection of claims 13, 20, 60-62, 70, and 64-74 under 35 U.S.C. § 103(a).

1. Independent Claim 13 and Dependent Claims 20 and 60-61: the References do not Teach or Suggest "an Enforcement Database Storing Case Data and Individual Data; [and] . . . Intelligence Applications Used to Transform the Border Management Data into Intelligence Using the Shared Border Management Data and the Case Data and the Individual Data Stored in the Enforcement Database."

The Examiner has rejected independent claim 13, and dependent claims 20 and 60-61 under 35 U.S.C. § 103(a). The initial burden of establishing a *prima facie* case of obviousness rests on the Examiner, and, in rejecting claims 13, 20, and 60-61 as obvious under 35 U.S.C. § 103(a), the Examiner has not established a *prima facie* case. *See* M.P.E.P. § 2142, 8th Ed. (July 2008). Establishing a *prima facie* case of obviousness requires a "clear articulation of the reason(s) why the claimed invention would have been obvious," making rejections based on "mere conclusory statements" unsustainable. *Id.* Along the same lines, any rejection based on obviousness must include a determination of: (1) the scope and content of the prior art, (2) the differences between the claimed invention and the prior art, and (3) the level of ordinary skill in the art. *See* M.P.E.P § 2141.

Because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention, the Examiner failed to establish a *prima facie* case of obviousness with respect to rejected claims 13, 20, and 60-61.

Claim 13 is directed to a computer-based system for implementing a border management application architecture. Among other elements, the system of claim 13 recites "providing an **enforcement database** storing case data and individual data; [and] . . . **intelligence applications** used to **transform the border management data into intelligence** using the **shared border management data** and the **case data** and the **individual data stored in the enforcement database**." See Claim 13 (Emphasis added). *Wong* fails to teach or suggest at least these features of the claimed invention. Moreover, *Coalition* does not make up for this deficiency in *Wong*.

The Examiner stated that *Wong* discloses "a processor, database storing data, [and] computer-readable medium encoding instruction for implementing an architecture (C12; L55-64)." Office Action at 5. The Examiner conceded that "Wong does not disclose a system or instruction directed to border management." Office Action at 6. The Examiner further conceded that "Wong does not disclose the specific names of applications (process imports, process exports, investigation, entry processing, exit processing, form submission and processing, case management or intelligence). . . ." Office Action at 5-6. The Examiner further conceded that Wong does not disclose "a database is named 'enforcement' or the specific descriptions of data as 'shared border management,' 'case' or 'individual.'" Office Action at 6. However, the Examiner erroneously characterized such information as "nonfunctional descriptive data" and

contended that it "will not distinguish the claimed invention from the prior art." Office Action at 6.

Claim 13 is directed to a computer-based system for implementing a border management application architecture. The system of claim 13 recites "instructions include[ing] providing an **enforcement database** storing case data and individual data; [and] . . . **intelligence applications** used to transform the border management data into intelligence using the **shared border management data** and the **case data** and the **individual data** stored in the enforcement database." Emphasis added. Clearly, the specific recited applications, database, and data have interrelated functionality and are essential to the purpose and function of the system of claim 13. The Examiner improperly seeks to divorce the recited applications, database, and data, and their recited interrelations from the function of the invention.

When Appellant presented this argument to the Examiner in the Amendment After Final, dated July 21, 2009, the Examiner simply responded in the Advisory Action by further asserting that "the names of the databases and applications and the descriptive nature of the data are non-functional." Advisory Action at 2.

Appellant respectfully disagrees. The names of the databases, core applications and data identify their functionality. By identifying the names of core applications, it is thus known what functions are to be performed by the core applications. For example, the core applications are identified as including "case management applications 320 [including] intelligence applications 3210, such as information synthesis 3212, and risk scoring and analytics 3214." Specification pg. 18, para. 60, lines 4-11. It will be apparent from the name of a risk scoring and analytics application that the software is

configured to perform a risk scoring and analytics function. Similarly, by identifying the types of data and databases, it is thus known what functions the data and databases are to perform in the recited border management application architecture.

The databases, core applications and data are further interrelated, with the function of one affecting the function of the others and operating together to perform the recited. For example, as recited, the **enforcement database** stores case data and individual data; and the **intelligence applications** uses the **shared border management data** and the **case data** and the **individual data** stored in the **enforcement database** to "transform data and information about an individual or case into knowledge and intelligence." Specification at pg. 25, para. 80, lines 1-3. "When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." MPEP 2106.01. Therefore, identifying the names or types of the databases, core applications, and data identifies the functionality of the databases, core applications, and data and therefore imparts functionality to their recitation in claim 13. Thus, the enforcement database, various recited applications, and various recited types of data distinguish the claimed invention from the prior art.

Returning to the prior art, *Wong* fails to teach or suggest providing one or more **management access interfaces** for interconnecting one or more management access channels with a set of core applications, including **an intelligence application**, to thereby provide **access points** and **tools** for the sharing and access of border management data among the set of core applications. *Wong* also fails to teach or

suggest a combination that includes **an intelligence application** used to transform border management data into intelligence **using shared border management data and case data and individual data** stored in an **enforcement database** as is recited in claim 13. Accordingly, claim 13 is clearly patentable over *Wong*.

Coalition does not overcome the identified deficiencies of *Wong.* Nonetheless, the Office Action states that *Coalition* discloses "a set of core applications for standard border management functions"—citing *Coalition* pg. 3, bullet 2; pg. 15, para. 5 for "centralized applications processing"; and pg. 22, para. 11 for "using technology to report and share intelligence." Office Action at 6. The Office Action states that *Coalition* discloses "a customer channel interface interconnecting the set of customer channels and the set of core applications"—citing pg. 7, paras. 5 and 7. Office Action at 6. The Office Action further states that *Coalition* discloses "one or more management access interfaces interconnecting the one or more management access channels with the set of core applications"—citing the foregoing and pg. 15, para. 5. Office Action at 6. The Office Action finally states that *Coalition* discloses "a database for sharing data that contains information from immigration, law enforcement and security agencies, international policing agencies and records of entries and exits of visitors and residents"—citing *Coalition* pg. 16, para. 13 through pg. 17, para. 6. Office Action at 7.

In none of these Examiner-cited excerpts, nor elsewhere in *Coalition*, is there a teaching or suggestion of the system recited in claim 13. Appellant notes that *Coalition* pg. 22, para. 11 is referring to the sharing of information "from shippers to both the Canadian and American governments." When viewed in context, *Coalition* pg. 15, para. 5, is referring to a "single processing centre in Canada" for visa applications and

"Canadian visa offices abroad." Similarly, the excerpt of *Coalition* pg. 16, para. 13 through pg. 17, para. 6 refers to a "database to screen visa applicants," but does not teach or suggest a database related to imports or exports. *See Coalition* bulleted pg. 16, para. 14. These excerpts, and the general statements made on *Coalition* pgs. 3 and 7, are hardly a teaching of providing one or more management access interfaces for interconnecting one or more management access channels with a set of core applications, including a set of intelligence applications, to thereby provide access points and tools for the sharing and access of border management data among the set of core applications. Similarly, these excerpts, and the general statements made on *Coalition* pgs. 3 and 7, are hardly a teaching of an intelligence application used to transform the border management data into intelligence using the shared border management data and case data and individual data stored in an enforcement database.

Neither *Coalition* nor *Wong*, considered together or independently, teaches or suggests a medium encoding instructions recited in independent claim 13. For example, the cited references, considered together or independently, do not teach or suggest a combination that includes:

> providing a set of core applications for standard border management functions in a **shared applications architecture, wherein the set of core applications includes a process imports application, a process exports application, one or more investigation applications, an entry processing application, an exit processing application, and a form submission and processing application**; . . .
>
> providing one or more management access interfaces for interconnecting one or more management access channels with the set of core applications **to thereby provide access points and tools for the**

> **sharing and access of border management data among the set of core applications**; and
>
> **providing an enforcement database storing case data and individual data;**
>
> wherein the set of core applications further comprise a set of case management applications, wherein the set of case management applications further comprise a set of **intelligence applications used to transform the border management data into intelligence using the shared border management data and the case data and the individual data stored in the enforcement database**.

as recited in independent claim 13 (Emphasis added).

In the Advisory Action, the Examiner asserted that Appellant "has argued the references separately". Advisory Action at 2. Even assuming the Examiner's characterization of the Appellant's argument is correct, which Appellant does not concede, *Wong* and *Coalition*, whether reviewed alone or in combination, fail to teach or suggest the above-quoted elements of claim 13, namely "instructions include[ing] providing an **enforcement database** storing case data and individual data; [and] . . . **intelligence applications** used to transform the border management data into intelligence using the **shared border management data** and the **case data** and the **individual data** stored in the enforcement database." A hypothetical *Wong/Coalition* combination would lack the above-quoted elements recited in claim 13, and therefore would not produce a predictable variant of the system recited in claim 13.

In view of the above, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. Consequently, the Examiner has failed to clearly articulate a reason why claim 13 would have been obvious to one of ordinary skill in view of the prior art. For at least these reasons, a *prima facie* case of obviousness with

respect to claim 13 has not been established and, therefore, the rejections of claim 13 under 35 U.S.C. § 103 as being obvious over *Wong* in view of *Coalition* are improper.

Appellant has thus shown above that independent claim 13 is allowable over *Wong* in view of *Coalition*. Additionally, claims 20, 60, and 61 are also allowable as they depend from claim 13. In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 13, 20, and 60-61 under 35 U.S.C. § 103.

2. Independent Claim 70 and Dependent Claims 72-73: the References do not Teach or Suggest "an Enforcement Database Storing Case Data and Individual Data; [and] . . . Intelligence Applications Used to Transform the Border Management Data into Intelligence Using the Shared Border Management Data and the Case Data and the Individual Data Stored in the Enforcement Database."

Appellant has shown above that independent claim 13 is allowable over *Wong* in view of *Coalition*. Independent claim 70, although different in scope from claim 13, recites elements similar to claim 13 and was rejected for similar reasons. *See* Office Action at 5-7. For at least the reasons stated above with respect to claim 13, claim 70 is also allowable.

Additionally, claims 72 and 73 are also allowable as they depend directly or indirectly from claim 70. In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 70 and 72-73 under 35 U.S.C. § 103.

3. Dependent Claims 62 and 74: the References do not Teach or Suggest "Providing a Shared Security and Integration Open Architecture Between the Customer Channel Interface and the Set of Core Applications, the Shared Security and Integration Open Architecture Monitoring Access to the core Applications."

Claim 62, which depends from independent claim 13, and claim 74, which depends from independent claim 70, both recite that "the instructions further include providing a shared security and integration open architecture between the customer channel interface and the set of core applications, the shared security and integration open architecture monitoring access to the core applications."

Appellant has demonstrated above that independent claim 13 and independent claim 70 are patentable over *Wong* in view of *Coalition* at least because *Wong* and *Coalition*, whether used alone or in combination, fail to teach or suggest certain elements of claims 13 and 70. Because a dependent claim necessarily includes each and every limitation present in the claim it depends from, the Office Action's rejection of claims 62 and 74 as allegedly being unpatentable over *Wong* in view of *Coalition* is improper and should be reversed.

Additionally, the Examiner stated that *Wong* discloses "a firewall between the Internet (the customer channel interface) and the Web Interface on the DBMS (the set of core applications)" and "external web authority information is stored for each customer in a customer file." Office Action at 8. Even assuming the Examiner's analogies between *Wong* and the recited claim elements is correct, which Appellant does not concede, the cited references also do not teach or suggest a combination that includes **"providing a shared security and integration open architecture between**

[a] **customer channel interface and** [a] set of core applications [including **a process imports application, a process exports application, one or more investigation applications, an entry processing application, an exit processing application, and a form submission and processing application**], the shared security and integration open architecture monitoring access to the core applications" as is currently recited in claims 62 and 74.

In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 62 and 74 under 35 U.S.C. § 103.

F. The Rejection of Claims 59 and 71 Under 35 U.S.C. § 103(a) over *Wong* in view of *Coalition* in view of *Bian* Should be Reversed, Because the References do not Teach or Suggest "[a] Set of Intelligence Applications [that] Includes an Information Synthesis Application and a Risk Scoring and Analytics Application that Applies Neural Networks, Decision Tree Analysis, Data Recognition Techniques, and Rules-based Algorithms to Synthesize Information, Identify Patterns, Analyze Historical Information, and Develop Risk Scores."

The Office Action rejects dependent claims 59 and 71 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Wong* in view of *Coalition* in view of *Bian*. Office Action at 8. Appellant has demonstrated above that independent claim 13 (from which claim 59 depends) and independent claim 70 (from which claim 71 depends) are patentable over *Wong* in view of *Coalition* at least because *Wong* and *Coalition*, whether used alone or in combination, fail to teach or suggest certain elements of claims 13 and 70. Because a dependent claim necessarily includes each and every limitation present in the claim it depends from, and because *Bian* does not teach at least the elements of claims 13 and 70 that *Wong* and *Coalition* fail to teach, the Office

Action's rejection of claims 59 and 71 as being unpatentable over *Wong* in view of *Coalition* in view of *Bian* is improper and should be reversed.

Additionally, the Examiner conceded that "Wong/Coalition does not disclose risk scoring or neural networks." Office Action at 9. Nonetheless, the Examiner stated that *Bian* discloses "using a neural network and algorithm" and risk score calculation. Office Action at 9. The Examiner concluded that "[i]t is obvious to use data analysis tools, such as neural networks, algorithms and scoring, to prioritize the need to further investigate a movement." Office Action at 9.

Wong, *Coalition*, and *Bian,* considered together or independently, do not teach or suggest a combination that includes "[a] set of intelligence applications [that] includes an information synthesis application and a risk scoring and analytics application that applies neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores," as recited in dependent claims 59 and 71.

For that reason, in addition to the reasons that related independent claim 13 are patentable, dependent claims 59 and 71 is therefore allowable. In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 59 and 71 under 35 U.S.C. § 103.

G. The Rejection of Claims 64-67 Under 35 U.S.C. § 103(a) over *Coalition* in view of *Wong* in view of *Bian* Should be Reversed, Because the References do not Teach or Suggest the Unique Combination Recited in Claim 64.

Because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the

claimed invention, the Examiner has failed to establish a *prima facie* case of obviousness with respect to rejected claims 64-67.

Claim 64 is directed to a computer-implemented method for implementing an integrated border management system. Among other elements, claim 64 recites:

> **monitoring the receipt** of the individual border transaction request and trade border transaction request, **the storing** of the requests in the border management knowledge base, **the receipt** of the individual entry data and trade import data, and **the storing** of the individual entry data and trade import data in the border management knowledge database **using a security and integration open architecture**;
>
> **analyzing**, by an **intelligence engine**, at least one of the individual entry data, the trade import data, the individual border transaction request, and the trade border transaction request stored in the border management knowledge base to **generate border intelligence** for detecting irregular individual and trade border transaction activity, wherein the analyzing includes **applying neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores**, and wherein the border intelligence includes advance passenger information, denied passenger information, alerts, watch lists, case patterns, tips, expired visa and overstay information, investigation initiations, and alert list additions; and
>
> storing the irregular individual and trade border transaction activity in the border management knowledge database

Claim 64 (Emphasis added).

Coalition fails to teach or suggest at least these features of the claimed invention. Moreover, neither *Wong* nor *Bian* makes up for this deficiency in *Coalition*. *See* Claim 64. Therefore, *Coalition* in view of *Wong* in view of *Bian* fails to teach or suggest at least the above-quoted claimed features.

In the Office Action, the Examiner conceded that

> *Coalition* does not disclose monitoring the receipt and storing of data using a security and integration open architecture, analyzing by an intelligence engine, data to generate intelligence using various techniques to synthesize information,

> identify patterns, analyze historical information and develop risk scores or store the irregular individual activity (i.e., the product of the intelligence analysis) in the database or a shared infrastructure.

Office Action at 11. The Examiner had previously conceded that *Coalition* does not disclose "the integrated concepts that produce a single knowledge base or interconnectivity or selection access" (Office Action dated January 17, 2008 at 14), "a risk scoring and analytics application" (Office Action dated January 17, 2008 at 15; see also Office Action dated December 23, 2008 at 17), and "the management/administration tool set or a client relationship tool set" (Office Action dated January 17, 2008 at 11; Office Action dated December 23, 2008 at 14). Nonetheless, the Examiner contended that "it would have been obvious to one of ordinary skill . . . to have included open architecture, as disclosed by Wong, in the system of Coalition for the motivation of integrating processes (including services) that result in a streamlined operation with data available in real-time." Office Action at 12. The Examiner also cited *Bian* for disclosure of "using a neural network and algorithm" and risk score calculation. Office Action at 12. Appellant respectfully traverses the rejection of claims 64-67 under 35 U.S.C. § 103(a) as being unpatentable over *Coalition* in view of *Wong* and in view of *Bian*.

First, regarding independent claim 64, none of *Wong*, *Coalition*, and *Bian*, considered together or independently, teaches or suggests the "computer-implemented method for implementing an integrated border management system for managing individual and trade border transactions" of independent claim 64. For example, the cited references, considered independently or in combination, do not teach or suggest a "border management knowledge base" storing "individual border transaction requests"

and "trade border transaction requests", "individual entry data and trade import data," and "irregular individual and trade border transaction activity," as recited in claim 64. *Coalition*, the only reference discussing border management, at best suggests a database directed to travellers and a separate database directed to shipments of trade goods. *See*, e.g., Coalition at pg. 8, para. 10 (bulleted).

Also, none of the cited references teach or suggests "monitoring the receipt of the individual border transaction request and trade border transaction request, the storing of the requests in the border management knowledge base, the receipt of the individual entry data and trade import data, and the storing of the individual entry data and trade import data in the border management knowledge database using a security and integration open architecture" as recited in claim 64.

The cited references do not teach or suggest much less "analyzing, by an intelligence engine, at least one of the individual entry data, the trade import data, the individual border transaction request, and the trade border transaction request stored in the border management knowledge base to generate border intelligence for detecting irregular individual and trade border transaction activity, wherein the analyzing includes applying neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores," as is recited in claim 64.

The unique combination of claim 64 is absent from the cited references. For at least these reasons, a *prima facie* case of obviousness with respect to claim 64 has not been established and, therefore, the rejection of claim 64 and related dependent claims 65-67 under 35 U.S.C. §103 as being obvious over *Coalition* in view of *Wong* in view of

Bian is improper and should be reversed. In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 64-67 under 35 U.S.C. § 103.

H. The Rejection of Claims 68 and 69 Under 35 U.S.C. § 103(a) over *Coalition* in view of *Wong* in view of *Bian* in view of *Gugliott* Should be Reversed, Because the References do not Teach or Suggest "Storing a Record of the Denial [of Entry] in the . . . Database."

The Office Action rejects dependent claims 68 and 69 under 35 U.S.C. § 103(a) as allegedly being unpatentable over C*oalition* in view of *Wong* in view of *Bian* in view of *Gugliotta*. Office Action at 13. Appellant has demonstrated above that independent claim 64 (from which claims 68 and 69 depend) are patentable over C*oalition* in view of *Wong* in view of *Bian* at least because C*oalition, Wong,* and *Bian*, whether used alone or in combination, fail to teach or suggest certain elements of claim 64. Because a dependent claim necessarily includes each and every limitation present in the claim it depends from, claims 68 and 69 are also allowable over C*oalition* in view of *Wong* in view of *Bian*.

In addition, claims 68 and 69 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Coalition* in view of *Wong* in view of *Bian* in view of *Gugliotta*. The Examiner conceded that *Coalition* does not disclose "storing the record of the denial [of entry] in the database." Office Action at 14. Neither *Wong* nor *Gugliotta* suggest storing such a denial in a database, and the Examiner did not suggest that either reference does. Office Action at 14. Instead, the Examiner simply stated, without citing any support, that "[i]t is obvious to expand the record keeping to record a denial of entry." Office Action at 14. The Examiner cited no support for that statement because no

support for that statement is available: It is novel and non-obvious to "stor[e] a record of the denial [of entry] in the . . . database," as recited in dependent claims 68 and 69. For that reason, in addition to the reasons that independent claim 64 is patentable. In view of the above, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 68 and 69 under 35 U.S.C. § 103.

VIII. Conclusion

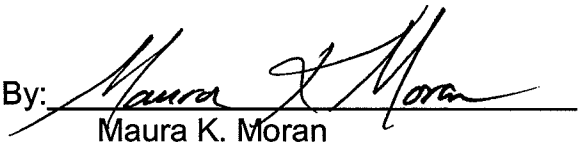
For the reasons given above, pending claims 13, 20, 59-62, and 64-74 are allowable and reversal of the Examiner's rejection is respectfully requested.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: October 21, 2009

By: 

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IX. Claims Appendix to Appeal Brief Under Rule 41.37(c)(1)(viii)

1-12 (Canceled)

13. A computer-based system for implementing a border management application architecture comprising:

at least one processor;

at least one computerized database storing border management data; and

at least one computer-readable medium encoding instructions for implementing a border management application architecture, wherein said instructions include:

providing a set of core applications for standard border management functions in a shared applications architecture, wherein the set of core applications includes a process imports application, a process exports application, one or more investigation applications, an entry processing application, an exit processing application, and a form submission and processing application;

providing a customer channel interface for interconnecting a set of customer channels that provide individual access points for a plurality of users of the border management application architecture and the set of core applications;

providing one or more management access interfaces for interconnecting one or more management access channels with the set of core applications to thereby provide access points and tools for the sharing and access of border management data among the set of core applications; and

providing an enforcement database storing case data and individual data;

wherein the set of core applications further comprise a set of case management applications, wherein the set of case management applications further comprise a set of intelligence applications used to transform the border management data into intelligence using the shared border management data and the case data and the individual data stored in the enforcement database.

14-19. (Canceled)

20. The computer-based system for implementing a border management application architecture of claim 13, wherein the one or more management access channels further comprise:

an information and knowledge management tool set for providing access points and tools for sharing and access of border management data;

a management and administration tool set for providing management and administration functions; and

a client relationship management tool set allowing customer assistance.

21-58. (Canceled)

59. The computer-based system for implementing a border management application architecture of claim 13, wherein the set of intelligence applications includes an information synthesis application and a risk scoring and analytics application that

applies neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores.

60. The computer-based system for implementing a border management application architecture of claim 13, wherein the intelligence includes advance passenger information, denied passenger information, alerts, watch lists, case patterns, tips, expired visa and overstay information, investigation initiations, and alert list additions.

61. The computer-based system for implementing a border management application architecture of claim 13, wherein the intelligence applications communicate the intelligence to a communication device of an officer.

62. The computer-based system for implementing a border management application architecture of claim 13, wherein the instructions further include providing a shared security and integration open architecture between the customer channel interface and the set of core applications, the shared security and integration open architecture monitoring access to the core applications.

63. (Canceled)

64. A computer-implemented method for implementing an integrated border management system for managing individual and trade border transactions, the method comprising steps of:

receiving an individual border transaction request and a trade border transaction request at a processing location;

storing the individual and trade border transaction requests in a border management knowledge base;

processing, in an automated manner, a subset of the individual and trade border transaction requests to determine whether the requests should be granted;

receiving individual entry data and trade import data, wherein the individual entry data includes arrival details, and wherein the trade import data includes import details;

storing the individual entry data and trade import data in the border management knowledge base;

monitoring the receipt of the individual border transaction request and trade border transaction request, the storing of the requests in the border management knowledge base, the receipt of the individual entry data and trade import data, and the storing of the individual entry data and trade import data in the border management knowledge database using a security and integration open architecture;

analyzing, by an intelligence engine, at least one of the individual entry data, the trade import data, the individual border transaction request, and the

trade border transaction request stored in the border management knowledge base to generate border intelligence for detecting irregular individual and trade border transaction activity, wherein the analyzing includes applying neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores, and wherein the border intelligence includes advance passenger information, denied passenger information, alerts, watch lists, case patterns, tips, expired visa and overstay information, investigation initiations, and alert list additions; and

storing the irregular individual and trade border transaction activity in the border management knowledge database.

65. The method of claim 64, further comprising communicating, from the intelligence engine, the intelligence to a border management officer.

66. The method of claim 64, further comprising analyzing, by the intelligence engine, external data sources to generate the border intelligence.

67. The method of claim 64, further comprising providing a shared infrastructure for managing at least one of human resources, finances, information technology, procurement issues, and a budget.

68. The method of claim 64, further comprising:

providing an inspection station with real-time access to the individual entry data and case history information;

verifying, at the inspection station, an individual's identity;

after verifying the individual's identity, determining, at the inspection station, whether to deny the individual's entry into a country based upon the individual entry data and criminal history information; and

if the individual's entry is denied, storing a record of the denial in the border management knowledge database.

69. The method of claim 64, further comprising:

providing an inspection station with real-time access to the trade import data and case history information;

determining, at the inspection station, whether to deny the individual's entry into a country based upon the individual entry data and criminal history information; and

if the individual's entry is denied, storing a record of the denial in the border management knowledge database.

70. A computer-readable medium encoding instructions for implementing a border management application architecture, wherein said instructions include:

providing a set of core applications for standard border management functions in a shared applications architecture, wherein the set of core applications includes a process imports application, a process exports application, one or more investigation applications, an entry processing

application, an exit processing application, and a form submission and processing application;

providing a customer channel interface for interconnecting a set of customer channels that provide individual access points for a plurality of users of the border management application architecture and the set of core applications;

providing one or more management access interfaces for interconnecting one or more management access channels with the set of core applications to thereby provide access points and tools for the sharing and access of border management data among the set of core applications;

providing an enforcement database storing case data and individual data; and

wherein the set of core applications further comprise a set of case management applications, wherein the set of case management applications further comprise a set of intelligence applications used to transform the border management data into intelligence using the shared border management data and the case data and the individual data stored in the enforcement database.

71. The computer-readable medium of claim 70, wherein the set of intelligence applications includes an information synthesis application and a risk scoring and analytics application that applies neural networks, decision tree analysis, data recognition techniques, and rules-based algorithms to synthesize information, identify patterns, analyze historical information, and develop risk scores.

72. The computer-readable medium of claim 70, wherein the intelligence includes advance passenger information, denied passenger information, alerts, watch lists, case patterns, tips, expired visa and overstay information, investigation initiations, and alert list additions.

73. The computer-readable medium of claim 70, wherein the intelligence applications communicate the intelligence to a communication device of an officer.

74. The computer-readable medium of claim 70, wherein the instructions further include providing a shared security and integration open architecture between the customer channel interface and the set of core applications, the shared security and integration open architecture monitoring access to the core applications.

75. (Canceled)

X. Evidence Appendix to Appeal Brief Under Rule 41.37(c)(1)(ix)

None.

XI. Related Proceedings Appendix to Appeal Brief Under Rule 41.37(c)(1)(x)

None.